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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVIII NUMBER 3 OCTOBER-NOVEMBER 1988

SILVER CONSUMER PRODUCTS PROMOTED

Silver International has launched an exciting campaign to increase retail sales of sterling silver jewelry, tableware and silver investment products, said Linda Meehan, the Director of **Silver International, 292 Madison Ave., New York, NY 10017**, during a talk given on September 28 at the American Mining Congress in Denver, Colorado.

The first phase of the Silver International (SI) campaign is dedicated to promoting the sale of silver jewelry because of the current growth of the total jewelry market and the popularity of silver jewelry.

The four key elements in SI's 1988 jewelry program are market research, generic advertising, cooperative programs with key retailer and manufacturers, and public relations work.

Silver International news photographs feature bold, dramatic sterling silver jewelry as the perfect accessory to this season's fashions.

She added, **"Magazine advertising forms the umbrella for the other marketing efforts,** all targeted at women, that are 25 to 54 years old, with individual earned incomes of $25,000 or more.

The ads feature the SI logo and slogan, "Silver, the eternal element of style," and will appear in fashion and lifestyle publications in October, November and December of this year. Newspaper photo stories and radio and video news releases support SI advertising.

Ms. Meehan also announced that **Falconbridge Ltd. and Nerco International have joined ASARCO, Callahan, Coeur d'Alene, Hecla, Noranda and Sunshine in the financing of SI.** She appealed for support by other mining firms, noting that this effort to increase consumer purchases of silver is of primary benefit to the miner. She reminded them, "A retailer can sell another product and refiners can produce other metals, but a mining operation needs a market for its silver."

LESS THAN 2% INCREASE IN SILVER MINE PRODUCTION

The world's silver mines produced 438.2 million troy ounces of silver in 1987 according to the authoritative annual **Mine Production of Silver 1987 - 1991** report, issued recently by The Silver Institute. This represents a 1.5% increase over the 431.6 million ounces mined in 1986.

Silver mines in the free world increased production by 2.4% from 336.9 million ounces in 1986 to 345 million ounces in 1987. **This increase was unable to satisfy the free world's 1987 demand for 441 million ounces.** The 96 million ounce shortfall was met by buying old (secondary) silver and silver from Communist nations.

The **Mine Production of Silver 1987 - 1991** reports the ranking of the top five producers of silver as follows: Mexico, 68.5 million ounces; Peru, 66.1; Canada, 45.8; Soviet Union, 43.4; and the United States, 39.8 million ounces.

This Silver Institute report is prepared with the participation of 268 mining entities in the 57 silver producing countries. They provide the Institute with data on their actual and projected mine production of silver. **This valuable 12-page report may be obtained for only US$28 from The Silver Institute.**

EUROPEANS FOCUS ON SILVER OUTLOOK

Delegates from twenty nations attending the 5th European Precious Metals Conference in Luxembourg on October 14, 1988, heard the Executive Director of The Silver Institute, John Lutley, review the overall supply and demand fundamentals of silver; comment on some of the important uses of this wonderful metal; and speak about new developments that will impact on future demand for this precious metal.

Speaking of supply and demand, he pointed out, "There was a silver deficit in the Western World until 1979. Then the rapid price increase that peaked at $45 per ounce in February 1980, brought enormous quantities of old silver (secondary silver) back into the market. The high price also drove industrial demand down by more than 100 million ounces. As a consequence, a market surplus of 150 million ounces developed in 1980."

"Since 1981, however, industrial demand has slowly increased as prices have declined. Also, secondary silver coming into the market has fallen each year and is now well below 1977 levels. So in 1986, the market was pretty much in balance. Early in 1987, when investors realized that silver was no longer in surplus, the price moved up from $5.54 in January to $7.72 in July—an increase of 39%."

"Since both mine supply and silver industrial demand rose almost equally in 1987, this balanced market has really continued to the present day."

Commenting on the important uses of silver, Mr. Lutley noted that the use of silver in photography has grown 21% in the past ten years and now represents nearly 40% of silver demand.

He added that the former president of Ilford, Peter Krause, estimates total silver usage in photography at 172 million ounces. The largest use area is X-rays at 54 million ounces followed by graphic arts at 43.5 and then amateur photography at 30.5 million.

Growth in the next five years is conservatively estimated at 16% to reach a total of 200 million ounces with amateur photographic use up 41% and X-rays up 19%.

He described the importance of the use of silver in electrical contacts, solders and brazing alloys, and as a catalyst, bacteriostat, algicide and inhibitor of disease—including its use in the area of burn therapy where silver, as the sulfadiazine salt, totally inhibits the growth of bacteria in open burn wounds, allowing the normal healing functions of the body to recover quickly and without distress.

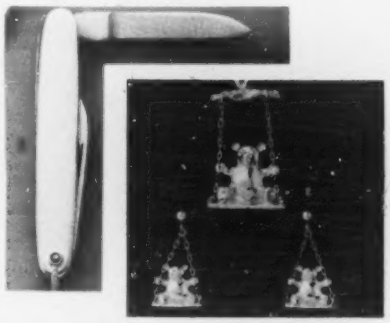
He also informed them about the work of Silver International which is aimed at increasing consumer demand for silver jewelry, sterlingware and silver investment products.

Regarding the use of silver in coinage, he said that world silver use in coinage has grown from a low of 6 million ounces in 1981 to above 30 million in 1987, with over 19 million ounces used in just one program—the U.S. Silver Eagle one-ounce bullion coin.

In conclusion, Mr. Lutley noted that **while silver mine production is expected to rise about 14% by 1991, silver usage is also expected to increase as a result of:** much greater demand for silver in China and European Communist countries; a comeback on the part of sterling silver consumer products; and, a growing use of silver in coinage. In addition, the largest producer of silver—Mexico—is expected to withhold millions of ounces of silver from the world market by using it to back their silver certificates.

SILVER GIFTS UNDER $100 SHINE FOR THE HOLIDAYS

This year, when you are choosing lasting gifts for family and friends, some of the most sought-after and affordable gifts on everyone's wish list are made of sterling silver. According to ***Giftware News***, "In response to strong consumer demand, manufacturers are creating many exciting, affordable silver gifts today to fit everyone's budget. There is an intrinsic value when you receive a sterling gift."



(Above, l. to r.) A charming sterling silver angel ($50) is one of a large collection of silver ornaments and many other gifts offered by Cazenovia Abroad, 67 Albany Street, Cazenovia NY 13035. . . For proof silver Panda coins ($85) and other coins and coin jewelry, ask MTB Banking Corp. for its new "Distinctive Gifts" catalog by calling 1-800-535-7481. . . Order one of Tiffany's handsome sterling silver pen knives ($42) or its Holiday Blue Book of gifts by calling 1-800-526-0649. . . Cute sterling silver teddy bear pendants and earrings ($60) are among the many sterling silver items in Sunshine Mining Company's Holiday Magic 1988 catalog. Call toll free 1-880-2-SILVER.

Silver International shows treasures in sterling silver above clockwise from the top: dove tree ornament by Cazenovia Abroad; perfume atomizer by Kirk-Stieff; ice cream scoop by Moor; American Eagle silver bullion coins; makeup brush by Towle; key ring by Tiffany and luggage tag. All gifts shown are priced under $100.

Silver is very malleable and is the most reflective of all metals, two factors that have made it possible for silversmiths to create detailed, innovative designs meant to be cherished and passed from generation to generation. Silver also engraves beautifully, which adds a personal touch to any gift.

This holiday season, there is something for everyone. Pictured are some creative sterling silver gift ideas that are sure to please those special loved ones on your holiday shopping list.

WORLD'S ELECTRIC POWER SYSTEMS RELY ON SILVER

The flow of electricity that powers the world's business and industry depends upon silver. Available at the touch of a button, rapidly switched from one circuit to another, and instantly interrupted in case of difficulty, **these electrical functions depend upon corrosion-free silver contacts.** Over 50 categories of electrical components which incorporate silver as the contact material are listed by the National Electrical Manufacturers Association.

Those that control electric motors, used nearly half of the more than 26,000,000 troy ounces of silver consumed yearly for contacts and conductors over the past five years.

These controls start, stop and set motors to run forward or in reverse, or at partial or full power. The U.S. Bureau of Census figures show that over 34,500,000 of these devices were produced in the United States in 1985. These silver contacts carry electrical power ranging from a fraction to an ampere, powering small appliances to 600-ampere loads used to operate oil well drilling motors.

The use of silver on motor control switches is universal. In the home, timing devices, thermostats, sump pumps, and virtually all electrical appliances use silver contacts. A typical washing machine, for example, requires 16 silver contacts to control its electric motor. A fully equipped automobile may have up to 40 silver tipped switches to activate its power steering, brakes, windows, mirrors, locks, etc.

SILVER BARS, COINS AND ROUNDS POPULAR WITH U.S. INVESTORS

Sales of Sunshine's silver bullion products have recently improved and interest in one-ounce silver bullion pieces has increased. Responding to this demand, **Sunshine Mining Company**, 300 Crescent Court, 15th Floor, Dallas, Texas 75201, produced a new one-ounce 99.9% pure silver bar.

As an introductory offer, during the month of September, Sunshine reduced the premium on its new one-ounce silver bar and its standard one-ounce Sunshine round by 35% — from 85 cents down to 55 cents. As a result, it quadrupled its sales of one-ounce silver bullion pieces.

However, according to Sunshine's Manager of National Operations, Michael B. Brown, **Sunshine rounds or medallions are still 2 to 1 favorites over silver bars.**

In North Carolina, **First Union Brokerage Services, Inc.**, One First Union Center, CMG-18, Charlotte, NC 28288, celebrated September as it Precious Metals Month by holding free seminars on investing in precious metals and by offering bars, ingots and coins for purchase through more than 700 First Union banking offices in North and South Carolina, Georgia, Florida and Tennessee.

First Union's Vice President and Precious Metals Manager, Jim Penegar said that its Precious Metals Month has produced many trades and added that about **70% of the trades were in silver.**

The public was also fascinated by attractive one-gram silver bars or wafers featuring the First Union logo. Over 50% of the First Union's entire stock of these delicate silver wafers were sold out on the first day.

And on the national scene, **sales of the U.S. Mint's one-ounce silver American Eagle coin increased from 50,000 coins in June 1988 to 226,000 coins in August.** Over 49.1 million coins have been sold since the program began in October, 1986.

FOR FUTURE REFERENCE:

1988 Silver Prices

1988	High	Low	Average
Sep. 88	6.64	6.13	6.35
Aug. 88	6.87	6.45	6.70
July 88	8.06	6.53	7.12
June 88	7.31	6.54	7.03
May 88	6.77	6.28	6.55
Apr. 88	6.84	6.38	6.46
Mar. 88	6.75	6.15	6.43
Feb. 88	6.59	6.08	6.33
Jan. 88	7.00	6.49	6.73

COMEX

Annual Silver Prices 1977-1987

Year	High	Low	Average
1987	10.20	5.36	7.01
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

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MEXICO'S 1987 PROOF SILVER LIBERTAD SOLD OUT

The beautiful 1987 proof issue of Mexico's Libertad one ounce silver bullion coin (pictured) was released by the Banco de Mexico on May 13. In contrast to the minting of 30,000 1986 proof Libertad coins, only 12,000 pieces were struck, and 10,000 were destined for export sales outside Mexico. According to A-Mark Precious Metals, the Libertad coin's exclusive distributor, this coin—priced at $39.95—sold out immediately.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States.

	TROY OUNCES		MILLION TROY OUNCES		
	August 1988	July 1988	Jan.-Aug. 1988	Jan.-Aug. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	3,422,961	3,603,301	3.3	3.3	3.3
From Coins	112,314	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	3,520,029	2,405,358	2.9	2.3	2.4
From New Scrap (in-plant clippings, waste)*	2,847,555	4,553,678	2.6	2.2	2.0
TOTAL PRODUCTION	9,902,859	10,562,337	8.8	7.8	7.7
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	5,148,346	5,873,771	4.6	3.8	3.7
Shipped Out as 999 Silver	5,084,617	4,732,590	4.1	3.9	4.0
TOTAL DISPOSITION	10,233,163	10,606,361	8.7	7.7	7.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	330,304	44,024	0.5	0.4	-0.3
THESE REFINERS' STOCKS AT END OF PERIOD	475,842	806,146	0.5	0.8	0.0

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	August 1988	July 1988	Jan.-Aug. 1988	Jan.-Aug. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	12,932,825	13,573,662	14.8	13.9	14.5
From Coins	401	539	0.0	0.1	0.1
From Old Scrap (used photo film & other products)	3,383,304	3,217,940	3.7	3.5	3.5
From New Scrap (in-plant clippings, waste)*	1,236,873	758,330	1.0	0.9	1.0
TOTAL PRODUCTION	17,553,403	17,550,471	19.5	18.4	19.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	1,620,959	1,482,196	1.9	2.0	2.0
Shipped Out as 999 Silver	14,648,657	16,487,221	17.5	16.3	17.0
TOTAL DISPOSITION	16,269,616	17,969,417	19.4	18.3	19.0
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	1,283,787	418,946	0.7	0.5	0.9
THESE REFINERS' STOCKS AT END OF PERIOD	6,526,941	5,243,154	6.5	5.5	5.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE
A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS
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WORLDWIDE INFORMATION ON SILVER

VOLUME XVIII NUMBER 6 DECEMBER 1988 - JANUARY 1989

INCREASED SILVER EAGLE COIN SALES PRODUCED BENEFITS FOR USA

Since June, the U.S. Mint has reported a gradual increase in the sales of its one-ounce pure silver American Eagle bullion coins. In June only 50,000 coins were sold. During July, this number was doubled to 100,000, and more than doubled to 226,000 coins in August.

And in September, collectors and investors purchased 353,000 pure silver American Eagle bullion coins, bringing the cumulative total of the **silver Eagle's sales up to 19,465,000 coins during its first two years of operation**.

Commenting on the U.S. Mint's silver coinage programs, the **American Mining Congress** recently said, "These successful silver coinage programs have already reduced the silver in the National Defense Stockpile by nearly a fourth, and if continued can replace the specter of silver dumping by an orderly consumption of excess stockpile silver."

At its Mining Convention in Denver, the American Mining Congress commended the U.S. Congress, the U.S. Mint and Congressman Frank Annunzio (D-IL) on the **highly successful silver coinage programs that have resulted in the consumption of approximately 31.4 million ounces of stockpile silver since March 1986**. Before the start of the coinage programs, the silver stockpile contained approximately 137 million ounces.

"If these trends continue, the stockpile should be down to a reasonable level within the next five years," said Dennis Wheeler, Chairman of the AMC Silver Committee and President of Coeur d'Alene Mines Corporation.

"These programs have provided a responsible and effective method of reducing the silver stockpile," Wheeler continued. "Many thanks are owed to Congressman Annunzio, Chairman of the House Subcommittee on Consumer Affairs and Coinage, for his leadership in the coinage area."

The dumping of the silver stockpile has been a threat hanging over the industry for several years. The American Mining Congress has opposed the dumping of this silver as having a potentially disastrous effect on the domestic silver industry. **By using the stockpile for bullion and commemorative coins, the government can reduce the carrying costs on the metal, and the Mint can generate profits that go toward reducing the national deficit.** And surcharges on the sale of silver Olympic coins have helped earn $18.7 million for the U.S. Olympic Committee.

SILVER HELPS SUPERB NEW KODAK FILMS PRESERVE LIFE'S BEST MEMORIES

Around the world, amateur photographers will celebrate 1988—the 100th anniversary of the snapshot camera—by taking 43 billion pictures, averaging seven prints for every person alive today, noted Peter M. Palermo, Vice President and General Manager, Consumer Products Division, Eastman Kodak Co.

A portrait taken using new Kodak Ektar 25 film.

People still take pictures for the same reason they did 100 years ago. It is a natural longing to preserve one's memories so we can make our best moment live forever.

Silver halide emulsions have made this possible, and new silver technology is the cornerstone for the dramatic improvements featured in Kodak's newest film products, Kodak Ektar 25 and Ektar 1000 films, for advanced 35mm photographers who use single lens reflex (SLR) cameras—20% of the 35mm market.

For photographers who want to produce great photographs, especially portraits, **Ektar 25** is the answer. It is the sharpest color print film ever made and

also has the finest grain of any print film, according to Wilbur J. Prezzano, Vice President and General Manager of Kodak's Photographic Products Group.

Print quality improvement is so apparent that even in standard size prints it can be perceived immediately. But the difference really stands out in larger prints. "Enlargements up to 20 x 30 inches and beyond are wiresharp, virtually grainless, and have spellbinding print quality," Mr. Palermo said.

Kodak's high speed Ektar 1000 film offers finer grain and higher color saturation than any color print film in its speed class, making it wonderful for low-light situations and long telephoto lens work.

Kodak vice president, Wilbur J. Prezzano, Photographic Products Group, left, and Peter M. Palermo, Consumer Products Division, show new silver Ektar film and a portrait taken using Ektar film.

Mr. Palermo added, "Ektar 1000 film allows photographers to capture images with excellent grain, sharpness and color under the most demanding lighting conditions. And it gives better color reproduction under tungsten illumination. The colors found in shadows are more accurately reproduced. For the discriminating owners of the 90 million 35mm single lens reflex cameras in use worldwide, this film is a most pleasing development."

Kodak research scientist, Dr. Gerhard Popp, noted the importance of silver's role in the delicate balancing of color, film speed, grain and sharpness required to create films with optimum "imaging efficiency."

He stated, "This achievement—producing images with greater amounts of photographic information—resulted from a breakthrough in imaging efficiency of the silver halide emulsions used in these films."

This late afternoon action shot of a golfer was exposed with Ektar 1000 film.

Imaging efficiency quantitatively describes the capability of film emulsions to capture light and translate it into a visible image. In both Ektar films, **silver halide T-Grain technology is the basis of the dramatic strides in imaging efficiency.** The uniform surfaces of the T-Grains scatter less light than conventional, randomly shaped silver crystals. This higher efficiency helps deliver a clarity and presence that makes all color prints look crisper and more vivid than ever before.

Regarding the future impact of these new films, Peter Krause, analyst and editor of ***Photofinishing News Letter***, points out that the slower film requires 4.5 to 5 grams of silver per square meter while the faster film uses 9 to 10 grams.

He also estimates that demand for silver by the consumer photography segment of the total silver halide market will grow from the 48 million troy ounces of silver used in 1987 to at least 65 million ounces by 1992. Furthermore, **he predicts that the high cost and marginal quality of electronic imagery will prevent video tape from adversely affecting this market over the next decade or more.**

12% INCREASE IN JAPANESE CONSUMPTION OF SILVER

Latest silver consumption statistics released by the Japanese import-export trade agency, MITI, showed Japanese commercial demand for silver totaled 67 million troy ounces during the first 8 months of 1988, up 12% over the 60 million used during the same period in 1987.

For the 8-month period, **photography** was the largest single user of silver. It used 36 million troy ounces in 1988 compared with 33 million in 1987. **Electronics** and electrical used 9 million in 1988, up from 8 million in 1987. **Jewelry** used 1.8 in 1988 against 1.4 in 1987. The use of silver in nitrates, soldering, plating, brazing

FOR FUTURE REFERENCE:
1988 Silver Prices

1988	High	Low	Average
Nov. 88	6.54	6.01	6.28
Oct. 88	6.38	6.16	6.29
Sep. 88	6.64	6.13	6.35
Aug. 88	6.87	6.45	6.70
July 88	8.06	6.53	7.12
June 88	7.31	6.54	7.03
May 88	6.77	6.28	6.55
Apr. 88	6.84	6.38	6.46
Mar. 88	6.75	6.15	6.43
Feb. 88	6.59	6.08	6.33
Jan. 88	7.00	6.49	6.73

COMEX

Annual Silver Prices 1977-1987

Year	High	Low	Average
1987	10.20	5.36	7.01
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

HANDY & HARMAN

and dental work climbed to 14 million in 1988 from 12 million in 1987.

This is a continuation of an upward trend in Japanese consumption of silver. For example, in 1973, Japan used 69 million troy ounces of silver, but by 1987 this number had grown by 33% to 92 million ounces. In contrast, only 9 million ounces were mined in Japan in 1987. And with projections showing declining mine production, Japan will become increasingly dependent on silver imports.

HIGH-END SILVER REALLY DOES SPARKLE

The October 16 issue of the jewelry industry's prestigious ***National Jeweler*** news magazine carried an article headlined "A Touch of Class: High-End Silver Sparkles."

The article by Veronica Foley notes, "Two of the biggest trends in sterling for fall into holiday are silver touched with gold or with the sparkle of stones." **Jacobson's** department stores feature this trend in the "Fine Art For Now and Forever" section of the store's holiday catalog by featuring the "floral fantasy" in sterling silver with 18K gold accents by Janet Gabriel pictured at left.

But silver's sparkle isn't limited to jewelry. Silver International reports that the back-to-tradition social attitudes, current modest silver prices, coupled with silver's intrinsic value, and the emphasis today on dressier, more elaborate table settings have rekindled the desire for sterling silver flatware, giftware and table accessories.

Confirming this, the first item on the American Express's illustrated list of exciting gift ideas for its Gold Card members reads, "A gourmet treat deserves an eye-catching container to show it off," and this gleaming silver caviar server with crystal insert bowl ($500) from **Gumps** (1-800-334-8677) is worthy of the finest caviar. One of **Tiffany's** "Corinthian" candlesticks in sterling silver ($625) can be lit to set a romantic mood (1-800-526-0649). And for desert, there's always a sterling silver Grand Baroque ice cream scoop ($70) by **Wallace International Silversmiths, Inc.** (617-561-2200). Don't forget your elegant handcrafted sterling silver napkin rings from **Sunshine Mining**, each at $54.50 (1-800-2-SILVER).

By interviewing sales representatives of companies with displays at the **225 Fifth Avenue Giftware Mart** in New York City, we learned that 1988 has been a banner year for sterling silver and silver-plated giftware. Leading the market are: Victorian antique silver and reproductions, giftware of traditional design, picture frames and baby cups, feeding spoons, baby picture frames and the most popular item of all—a sterling silver dumbell rattle by **Empire Silver Company** (718-232-3389).

INDUSTRY RELIES ON *NEW SILVER TECHNOLOGY*

New Silver Technology (NST) is in now in its 15th year of publication. During the past year, it has provided its subscribers with: a valuable monthly listing of all papers and patents on silver; one-page summaries of the ten most important developments in silver technology each month; 100 digests of other patents and papers; and an easy-to-order system for obtaining complete papers or patents on selected subjects.

Just the September 1988 issue of ***NST*** carried reports on how silver facilitates the performance of superconducting materials; new dry processed silver halide emulsion produces an image faster than conventional wet processing; silver sulfadiazine in a sponge-forming polymer wound dressing facilitates rapid healing of burns and other surface wounds; and how a new silver-containing zeolite (framework mineral) effectively inhibits the growth and colonization of bacteria, pathogenic molds and yeast in water.

NST has proven to be the least expensive way of keeping up to date on the most important new development in silver technology. Send in your subscription order and check today!

---------- NST ORDER COUPON ----------

Annual Subscription to ***New Silver Technology*** for 1989, U.S.$275.

Attached is check for ____ subscriptions to ***New Silver Technology*** 1989, U.S.$_____

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Company _____

Address _____ Zip _____

Make check payable to:

The Silver Institute
Suite 101, 1026 16th St. NW
Washington, DC 20036

SILVER MEDALLIONS BENEFIT SPECIAL OLYMPICS ATHLETES

Two beautiful 1-ounce pure silver medallions were minted by Sunshine Mining Co., 300 Crescent Court, 15th Floor, Dallas, Texas 75201. One marks the **20th birthday of Special Olympics International** and the other, the **11th International Special Olympic Games** in Reno-Tahoe on April 1-8, 1989. "By purchasing these medallions, you will help us reach out to many more children and adults with mental retardation," said Special Olympics Chairman, Eunice Kennedy Shriver. **Please call toll-free 1-800-2-SILVER for detailed information.**

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States.

	TROY OUNCES		MILLION TROY OUNCES		
	October 1988	September 1988	Jan.-Oct. 1988	Jan.-Oct. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	3,403,343	3,055,192	3.3	3.3	3.3
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	3,099,742	2,501,695	2.9	2.3	2.4
From New Scrap (in-plant clippings, waste)*	1,570,965	1,817,035	2.4	2.0	2.0
TOTAL PRODUCTION	8,074,050	7,373,922	8.6	7.6	7.7
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	3,540,361	3,294,954	4.4	3.7	3.7
Shipped Out as 999 Silver	4,242,368	3,716,596	4.1	3.9	4.0
TOTAL DISPOSITION	7,782,729	7,011,550	8.5	7.6	7.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	291,321	362,372	1.1	0.8	-0.3
THESE REFINERS' STOCKS AT END OF PERIOD	1,129,535	838,214	1.1	1.1	0.0

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	October 1988	September 1988	Jan.-Oct. 1988	Jan.-Oct. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	14,087,639	13,406,541	14.6	14.3	14.5
From Coins	2,183	440	0.0	0.1	0.1
From Old Scrap (used photo film & other products)	3,896,860	4,538,623	3.8	3.5	3.5
From New Scrap (in-plant clippings, waste)*	1,272,941	1,690,888	1.1	1.0	1.0
TOTAL PRODUCTION	19,259,623	19,636,492	19.5	18.9	19.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	1,696,641	2,675,021	2.0	2.1	2.0
Shipped Out as 999 Silver	16,089,808	16,216,753	17.2	16.7	17.0
TOTAL DISPOSITION	17,786,449	18,891,774	19.2	18.7	19.0
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	1,473,174	744,718	2.9	1.5	0.9
THESE REFINERS' STOCKS AT END OF PERIOD	8,744,833	7,271,659	8.7	6.5	5.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVIII NUMBER 7 FEBRUARY 1989 - MARCH 1989

1988 SET BASIS FOR GROWING SILVER INDUSTRY

By creating new and better cameras and superior film products, Kodak and other firms will help assure a strong increase in future demand for silvered film. The photographic industry is the world's largest consumer of silver.

For silver, 1988 was a relatively quiet year insofar as trading was concerned, but the year saw many activities and events that bode well for the healthy future growth of the silver industry.

There was the announcement by General Motors Corp. that its 1989 Cadillac Seville models would carry, as an option, the silver-coated windshields which clear ice and snow from the glass in two minutes. The Ford Motor Co. also announced that this option would be available on five of its model cars for 1989. The Libby-Owens-Ford Glass Co. said that several other automobile manufacturers are evaluating the use of this new safety feature for their cars also. **The potential market? About 8 million ounces per year in the USA alone!**

A group of far-sighted North American mining companies, including ASARCO, Callahan Mining, Coeur d'Alene Mines, Falconbridge Ltd., Hecla Mining, Nerco Minerals, Noranda Sales and Sunshine Mining, established a silver marketing organization within The Silver Institute - "Silver International." Its 1988 public relations activities focused on the promotion of silver jewelry among working women in metropolitan areas of the United States. **The goal: Increase use of silver in consumer products to 90 million ounces!**

In March 1988, photography industry experts conservatively estimated that the world's consumption of silver for photography could increase 22% in five years. What does this mean? The industrialized world used 172 million troy ounces of silver for photography in 1987 and **210 million ounces could be needed by 1992**. And that doesn't include the rapidly growing demand for photographic products in the People's Republic of China.

Since June, the U.S. Mint has reported gradually increasing sales of its one-ounce, pure silver, American Eagle bullion coins. In June only 50,000 coins were sold. In July, 100,000. In August, 226,000. And during the holiday season of November and December, another 565,000 coins were sold. This and other successful silver coinage programs **reduced the U.S. National Defense Stockpile from 137 million ounces in 1986 to 106 million at the end of 1988.**

CANADIAN SILVER MAPLE LEAF COIN SETS SILVER PRICE FLOOR

Denis Cudahy, Vice-President, Manufacturing (left), and Richard Belair, Director, Precious Metals Products working closely together during production of early 1989 Silver Maple Leaf investment coins. Mr. Belair's sales projections for the Silver Maple Leaf must be factored into Mr. Cudahy's annual production schedule for all the Royal Canadian Mint's products. Early indications point to a continued strong demand for this popular new silver investment coin.

A quiet revolution took place in the silver bullion investment business when the Royal Canadian Mint issued its 9999 fine silver, one-ounce Maple Leaf, and gave it a legal tender value of $5 Canadian.

Why was this so revolutionary? Because, unlike any other silver bullion coin or medallion, the Canadian government guaranteed potential buyers that **even if the world price of silver should go below $5 Canadian, their Silver Maple Leafs would retain their value and never be worth less than $5 Canadian, or the equivalent in foreign exchange.**

The reaction of Maple Leaf dealers was very positive; and, in what may be the understatement of the year, a spokesperson of the Canadian Imperial Bank of Commerce said, "We believe these new Canadian bullion coins will stimulate the small investor's interest in precious metals as an investment."

In making its announcement, the Royal Canadian Mint stated, "Investors will be able to purchase and sell the new coins with the same ease they now do with the Gold Maple Leaf," and described its primary level distributors in this way: "Most importantly, these firms are marketmakers in precious metals, offering to buy and sell the coins at any time."

The Mint's President, **Mr. Maurice A.J. Lafontaine**, is confident about the expanded role being played by the Mint in the world's precious metals markets and noted that Canada is "one of the world's largest producers of silver." (At over 40 million ounces, Canada is one of the top five silver producers in the world.) The Mint's sales of the silver Maple Leafs amounted to over one million ounces during the last six weeks of 1988.

Although precise sales figures for the period of November 17 through the end of 1988 are not available, Mint spokespersons and bullion dealers appear to be pleased with Silver Maple Leaf sales. **Buyers of the Silver Maple Leaf are impressed by the fact that it is the purest silver bullion coin (9999 fine) on the market and that its face value reduces the possibility of a loss to a minimum.** Mint officials are already talking about the possibility of exceeding the Mint's original sales target.

SILVER LASERCARD = 1,600 PAGES IN YOUR WALLET!

The Drexler LaserCard, the silver-coated, credit-card sized data bank, is stepping up to mass use with a newly-signed license agreement between CSK Corp. of Japan and the Drexler Technology Corp., Mountain View, California.

The CSK Corp. license permits the manufacture and sales of laser machines which write on and read from the Drexler LaserCard. This will be the first time these machines will be manufactured on a mass production scale.

Successful field trials of the LaserCard have been conducted in Europe, Asia and America using individually made laser machines. In England, for example, British Telecom is underwriting the trial use to maternity patients at a London hospital. The card provides attending physicians, nurses and pharmacists with an ongoing statistical record as the pregnancy progresses.

At Houston's Baylor University College of Medicine's outpatient clinic, the LaserCard is issued to all patients and contains their digitized photograph to ensure proper use of the data and prescriptions given on the card.

U.S. Military services are exploring the use of the card as a substitute for hundreds of technical manuals. The LaserCard has a storage capacity of 4 megabytes, or over 1,600 pages of text in its read-only-memory version. The value of the manual in card form is not only that most manuals can be recorded on one LaserCard, but that revised manuals can be issued as a complete unit, obviating the need for someone to remove and replace revised pages in these bulky loose-leaf volumes. In addition, one hundred, 1,600-page manuals in LaserCard form will require only three inches of card-file drawer space.

The LaserCard silver-coated optical memory card was developed and patented by **Drexler Technology Corp.**, 2557 Charleston Road, Mountain View, California 94043. This optical data products company's plant has a capacity of nearly 40 million cards per year.

FORTUNOFF PROMOTING NEW SILVER DESIGNS

In collaboration with the Society of North American Goldsmiths, one of the world's largest silver retailers, **Fortunoff** of Fifth Avenue and 54th Street, New York, is stimulating new interest in designing silver holloware and flatware pieces through its design competition called **Silver: New Forms and Expressions.** Many U.S. artists and designers have submitted original drawings. In addition to five cash prizes, all pieces accepted for competition will be exhibited at Fortunoff from October 2 to October 20, 1989. **Inquiries: Fortunoff Silver Competition, P.O. Box 132, Westbury, N.Y. 1 (516) 832-9046.**

SILVER SHIMMERS ON '89 PARTY TABLES

Breakfast for two is wonderfully intimate and romantic, and having a guest in your home is always a special event. So, add that extra touch of elegance to your table with sterling silver accessories. Shown here: flatware, Lunt, bread basket and pedestal bowl, Fortunoff, salt and pepper shakers, Tiffany; napkin ring, Buccellati. Linens by Paper White. China by Mottahedah.

Parties held to celebrate special occasions, or to honor those special friends, will be more elegant and more sophisticated in 1989. Many celebration tables will be trimmed with flickering candles, luxurious embroidered linens and the finest sterling silver accoutrements.

"A return to elegance" is how Mediamark Research describes these new U.S. dining trends. "Nearly half of the dining tables in the nation have cloth tablecloths and napkins. In addition, nearly one out of four is set with fine bone china and lead crystal stemware. And, nearly one in six households eat with sterling silver flatware," the trend tracking firm reports.

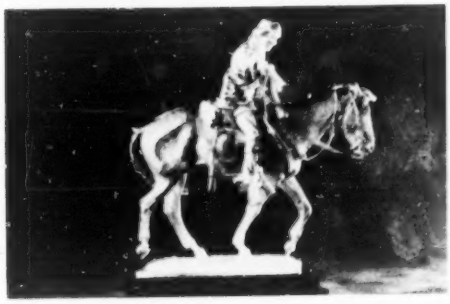
According to **Silver International**, the current modest silver prices, coupled with its intrinsic value, and today's emphasis on dressier, more elaborate table settings have rekindled the desire for sterling silver flatware and table accessories. The many special qualities of this precious metal are what have made it a treasured possession throughout the ages. Silver combines superb design, lustrous beauty, durability and heirloom quality.

Whether an intimate breakfast for two or a formal dinner for twenty, **here are some tips from Silver International to help make any table look sensational.** Use your favorite colors in fine foods, table settings and other objects; place each napkin in a gleaming silver napkin ring; be creative in the choice of your centerpiece – a small basket of fruit, a beautiful plant or sea shells – and set the table with your finest silver. Not only will your table look sensational, but frequent use of sterling is the best way to keep it bright and shining. It also enhances the finish, adding a soft patina to the silver.

Just wash right after use in hot soapy water, rinse with clean hot water and dry with a soft cloth or a product, such as The Silver Butler – a very affordable, high quality cotton terry silver drying towel – to keep that shiny glow. If sterling is not used daily it should be stored air tight in a silver chest or storage cloth rolls.

So, when entertaining, have your sterling silver close at hand. It adds that eternal element of style to any table.

SILVER KIT CARSONS RAISE FUNDS FOR MONUMENTAL CARSON



In Walla Walla, Washington, a life-size (15 feet high) bronze statue of the legendary trail-blazing hunter and warrior of the American West, Kit Carson, stands waiting in the Maiden Foundry Enlargement Center.

In addition to the monumental statue of Carson, Montana sculptor, Buckeye Blake, created a **limited edition of 36 smaller statues of Kit Carson (seen at left) containing 250 troy ounces of 99.9% pure silver.** These are being sold for $8,500 each and the proceeds are being used to offset the costs of the monument and site preparation in Carson City, Nevada. Sales of the silver Carsons have been "very good," so it looks like the people of Carson City will celebrate Nevada Days this year under the bronze gaze of their patron legend. For more information, write to **Kit Carson Project, 1293 Alicia Circle, Gardnerville, Nevada 84914.**

SUNSHINE MINING USES SILVER TO PROTECT IDAHO WILDLIFE

Sunshine Mining Co. recently captured the graceful lines and beauty of Cinnamon Teals and Rooster Pheasants on two medallions of one troy ounce of 99.9% pure Idaho silver. They form part of Sunshine Mining Co.'s Upland and Waterfowl Game Birds Collector's Series; and the set of two realistic and finely crafted medallions sell for $42 plus $3 for shipping. According to David H. Jardine, President of the Bullion Division of Sunshine Mining Co., "A significant percentage of the proceeds from each medallion sold will go to the Habitat Improvement Program of the Idaho Department of Fish and Game."

Sunshine has also published a new 24-page general GIFTS catalog which, according to Operations Manager, Michael B. Brown, "features items that we will carry continually. These items have proven to be our best sellers, but there are some new items, too, such as the 12 signs of the Zodiac medallions, each made of one ounce of pure silver." Other items include everything from Sunshine bullion bars to very reasonably priced Special Occasion Medallions, silver chains, the Endless Knot of Love pin and fascinating encased silver crystals. To order your Wildlife medallions or **to get your free copy of this four-color GIFTS catalog, call Toll Free 1-800-2-SILVER or write to Sunshine Mining Co., Attn: Bullion Division, 300 Crescent Court, 15th Floor, Dallas, Texas 75201.**

ALBANIA AND AUSTRALIA MINT HOLEY SILVER COINS

For the first time since the demise of Imperial China, nations are minting coins with holes in them. In Albania, the hole in the holey coin is an integral part of the coin's design. On both sides of the 50 Leke coin, **the hole takes the form of a tunnel.** On one side, the engine is seen coming out of the tunnel, and on the other side, the back-end of the train is viewed going into the tunnel. These interesting coins are also huge – 2½ inches in diameter and each coin contains 5 ounces of .925 fine silver.

On the other side of the world, Australia minted its first legal tender ounce denominated silver coins. These coins, called the Holey Dollar and the Dump, take their name and shape from Australia's first official coins, which were silver pieces of eight with a hole punched in the center. The outer rim became known as the "Holey Dollar" and the center had a 15 pence face value and was called "The Dump." The **new Holey Dollar (at right)** contains one ounce of silver of 99.9% purity (sterling silver is 92.5% pure) and **The Dump**, which fits neatly into the center of the Holey Dollar, contains 1 4 ounce of 99.9 silver and has a face value of 25 cents.

NEW SILVER INVESTMENT BOOKLET NOW AVAILABLE TO THE PUBLIC

The Silver Institute has published a consumer-oriented booklet called, **"Your Introduction to Investing in Silver" that is a "must"** for novice silver investors and for all persons who are thinking of investing in silver for the first time. It gives the reader interesting information on why silver has enduring value, how it is used, supply and demand factors, and how its price is determined. It also describes silver's role in financial planning. Other valuable information on the different types of physical silver that are available for investors, the convenience of silver certificates and accumulation plans are all included in this 16-page booklet. **"Your Introduction to Investing in Silver is available for only $5.00 from The Silver Institute.**

FOR FUTURE REFERENCE:

1988 Silver Prices

1988	High	Low	Average
Dec. 88	6.28	6.01	6.13
Nov. 88	6.54	6.01	6.28
Oct. 88	6.38	6.16	6.29
Sep. 88	6.64	6.13	6.35
Aug. 88	6.87	6.45	6.70
July 88	8.06	6.53	7.12
June 88	7.31	6.54	7.03
May 88	6.77	6.28	6.55
Apr. 88	6.84	6.38	6.46
Mar. 88	6.75	6.15	6.43
Feb. 88	6.59	6.08	6.33
Jan. 88	7.00	6.49	6.73

COMEX

Annual Silver Prices 1977-1988

Year	High	Low	Average
1988	8.06	6.00	6.53
1987	10.20	5.36	7.01
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

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LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	NOVEMBER 1988	OCTOBER 1988	Jan-Nov 1988	Jan-Nov 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE				MONTHLY RATE	
From Primary (ores & concentrates)	3,511,249	3,403,343	3.3	3.3	3.3
From Coins	150,000	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	3,133,999	3,099,742	2.9	2.3	2.4
From New Scrap (in-plant clippings, waste)*	2,749,680	1,570,965	2.4	2.0	2.0
TOTAL PRODUCTION	9,544,928	8,074,050	8.7	7.6	7.7
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,684,363	3,540,361	4.4	3.6	3.7
Shipped Out as 999 Silver	4,898,893	4,242,368	4.1	3.9	4.0
TOTAL DISPOSITION	9,583,256	7,782,729	8.6	7.5	7.7
RESULTING CHANGE OF THESE REFINERS'				TOTAL FOR PERIOD	
STOCKS (Production Minus Disposition)	-38,328	291,321	1.1	0.5	-0.3
THESE REFINERS' STOCKS AT END OF PERIOD	1,091,207	1,129,535	1.1	0.9	0.0

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	NOVEMBER 1988	OCTOBER 1988	Jan-Nov 1988	Jan-Nov 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE				MONTHLY RATE	
From Primary (ores & concentrates)	14,302,465	14,087,639	14.6	14.5	14.5
From Coins	1,008	2,183	0.0	0.1	0.1
From Old Scrap (used photo film & other products)	4,462,366	3,896,860	3.9	3.5	3.5
From New Scrap (in-plant clippings, waste)*	1,444,872	1,272,941	1.1	1.0	1.0
TOTAL PRODUCTION	20,210,711	19,259,623	19.6	19.1	19.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	2,277,016	1,696,641	2.0	2.1	2.0
Shipped Out as 999 Silver	17,421,407	16,089,808	17.2	16.9	17.0
TOTAL DISPOSITION	19,698,423	17,786,449	19.2	18.9	19.0
RESULTING CHANGE OF THESE REFINERS'				TOTAL FOR PERIOD	
STOCKS (Production Minus Disposition)	512,288	1,473,174	3.4	0.8	0.9
THESE REFINERS' STOCKS AT END OF PERIOD	9,257,121	8,744,833	9.3	5.7	5.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVIII NUMBER 8 APRIL-MAY 1989

JAPANESE USE OF SILVER INCREASED 38% OVER PAST THREE YEARS!

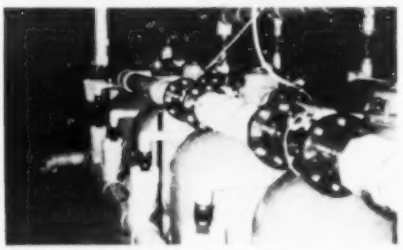
The booming economy of Japan lifted its 1988 gross national product to 366,469 billion yen, a 15% increase over 1985. On the other hand, the use of silver—an important barometer of industrial activity—rose 38%, reaching 104.3 million troy ounces in 1988 compared with 75.4 million ounces in 1985.

All industrial sectors listed in the silver consumption report by the Ministry of International Trade and Industry contributed to this growth. The leading use was photography: 56.7 million ounces, a 34% increase over 1985. The electrical-electronics sector accounted for 5.6 million ounces, or 56% over the 3.6 million ounces used in 1985.

Silverware and jewelry enjoyed the most spectacular gains—214%, up from 1.4 to 3.0 million troy ounces over the same period.

Other Japanese industrial use of silver grew 37% from 28.2 million ounces in 1985 to 38.5 million ounces in 1988.

SWIMMING POOL WATER HEALTHIER WITH SILVER



Over 5,000 U.S. pools use this silver treatment system.

"Because of the silver treatment we began last year, we now train and compete in water that is cleaner and healthier," says Glenn Patton, Head Swimming Coach, University of Iowa. "All of the coaches on our staff and the University's Physical Education teachers can actually feel the difference in their eyes, throat and sinuses at the end of each week. And our athletes stay healthier." **"Competitive sports have suffered from the effects of heavily chlorinated water for many years,"** said Dale Neuburger, Manager, Indiana University Natatorium in Indianapolis—one of two largest intramural facilities that are used for swimming competitions in the U.S. He added, "Swimmers' workouts were really limited; they could only swim so many hours before eye irritation became unbearable.

"Now, the results of using silver-copper anode treatment in terms of reduced eye irritation, skin irritation, and even lung irritation, are really remarkable. In addition, we can hold chemical treatment of the pool's water down to the minimum, using only 40% of the chemicals we used before," noted Neuburger.

"We had what is known as the **Tarn Pure** system installed in one of our pools over a year ago and were so satisfied that we had it installed in another pool in January," Neuburger added. "Not only is it a great system healthwise, but it cuts down on chlorine fumes that have a devastating effect on clocks, scoreboards, ladders, etc. And then there is another silent and unknown danger caused by those same fumes—corroding the steel frames that hold up the false ceilings over pools."

Additional information on this effective silver-copper anode treatment of swimming pool water may be obtained from Paul G. McClory, **Tarn Pure USA, 2300 Paseo del Prado, Suite D 206, Las Vegas, Nevada 89102. Telephone: 1-800-635-7873.**

MAJOR EXPANSIONS IN SILVER CONSUMPTION SEEN

During The Silver Institute's recent annual meeting, held on Grand Cayman Island, a record number of Silver Institute members and guests listened to Dr. Sungho Jin of AT&T Bell Laboratories explain how "one of the hottest topics in the scientific and technological communities," **high temperature superconductors, could create a totally new annual market for 29 million ounces of silver.** One of the many reasons for excitement over superconductors is illustrated by an example cited by Dr. Jin: "Ordinary batteries last, on the average, a couple of years; a superconductive battery could last *one thousand years.*"

Also related to **Consumption Trends**, Peter Krause, Vice President, Imaging Technology Markets Inc., explained why the biggest single industrial user of silver—the worldwide photographic industry, which consumed 187 million ounces of silver in 1988—will increase its consumption of silver "by 5% to 7% per year for the next five years and probably on out." The Director of Corporate Pricing of Eastman Kodak, Alan Cummins, added that in future years "Kodak . . . the world's largest (corporate) consumer of silver, will continue to need and use a steady flow of this precious metal."

M. Tonoki, F.B. Bessenyey, L. Vigdor, R. Eyzaguirre and Dr. Sungho Jin attending an institute work session at annual meeting.

Successful efforts to increase silver jewelry sales in the United States were reported by the Director of Silver Trust International, Linda Meehan. She also appealed to non-participating mining companies to help finance the sales promotion of sterling tabletop and giftware products and to convince more consumers to invest in silver coins and other bullion products.

Silver coins enjoy international popularity according to Gunther Oltmann, Senior Officer of the West German Ministry of Finance, who said that **due to public demand, West Germany returned to minting 62.5% silver commemorative DM 10 coins in 1987.** The public was delighted, and over 16,000,000 of the first two coins—marking the 750th anniversary of Berlin and 30 years of the European Community—were sold. They consumed more than 5 million ounces of silver!

Other **silver and gold coinage programs** were discussed by Maurice Lafontaine, President and Master of the Royal Canadian Mint; Donna Pope, Director of the United States Mint; and Stephen Gotwald, Vice President and General Manager of GoldCorp Australia.

The first speaker on **Trends in Gold and Silver Investments** was Stanley Steinberg, Executive Vice President of Prudential-Bache Metal Company, who declared, "We're so positive that precious metal investments will soon come into their own with the American public, that we've committed ourselves to a major restructuring of our retail marketing department" with the objective of increasing business opportunities and creating new markets for retail precious metals.

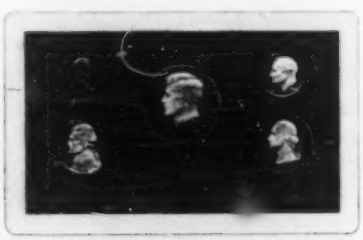
Trends in the Far East were presented by David Saunders, Managing Director, Mase Westpac Hong Kong Ltd., followed by Alfred Schneider, First Vice President, Swiss Bank Corp of Zurich, who described trends in Europe. A trader's view was presented by the Chairman of the New York Commodities Exchange (COMEX), John Hanemann.

The **Prospects for Silver in the 1990s'** section of the program included a detailed projection of exploration activities by Fred Graybeal, Chief Geologist, ASARCO, while Firoze Katrak, Vice President, Charles River Associates, gave an economist's view and Edwin Arnold, Metals Specialist of Merrill Lynch, Pierce, Fenner & Smith, London, described his view of the future silver market.

PUBLIC WANTS 90% SILVER PROOF COIN SETS

A survey carried out by ***Coin World***—the major weekly newspaper for coin collectors—and The Silver Institute produced 1,051 telephone and 83 mail responses that show over 92% of the responses are interested in purchasing a U.S. Proof set containing a half dollar, quarter dollar and a dime struck in 90% silver even though the prices would be *greater* than the current $11 for Clad Proof sets and $45 for Prestige Proof sets.

Almost 90% of the total sample are individual collectors and **86% of them are already active buyers of clad Proof sets.** And 60% of this group buy more than two Proof sets per year. (Less than 3% of the responses came from coin dealers.)



The poll also indicated that **by issuing a 90% silver Proof set, the U.S. Mint would be expanding the market** because although 37.8% said they want this to take the place of the current clad Proof set, another 37.6% indicated that they want the 90% silver coin set *in addition to* the Mint's current clad Prestige proof sets. Some 13.5% want the silver proof coins to be part of the Prestige Proof set.

Each 90% silver Proof coin set would contain six-tenths of an ounce of silver, and if it were priced between $13 and $16, over 94%

said they would buy a set. However, if the price were increased to the $17 - $20 range, the market could shrink to the 63% that said they would purchase the set at the higher price range. However, John Lutley, Executive Director of The Silver Institute, pointed out, "I don't think it quite means that if the set comes out it has to be priced under $17 or 36% won't buy it, but I think their preference clearly is for a lower price."

For the past three years, the U.S. Mint has sold an average of 3.5 million Proof sets containing proof versions of each of the circulating coins of the year. If each set contained 6/10 of an ounce of silver and sales remained at current levels, **this program would consume 2.1 million troy ounces of U.S. silver per year.**

$105,000 BUYS A SILVER REMINGTON!

The first and only Museum Proof offered to the public from a new silver edition of Frederic Remington's famous "Broncho Buster" was sold recently at the 17th Annual Convention of the Safari Club International in Reno, Nevada to Lee R. Anderson of Minneapolis for $105,000. The 1,000-ounce, pure silver Remington sculpture is one of five Museum Proofs that are part of the only edition of Remington sculptures in silver ever authorized by the Frederic Remington Art Museum of Ogdensburg, New York.

In addition to the five Museum Proofs, the Remington Museum has authorized Silversmiths Group to produce 100 silver Broncho Busters. Each will contain more than 1,000 ounces of pure silver (about 70 pounds), according to Philip R. Friedman, Chairman of **Silversmiths Group U.S.A., 600 W. Hillsboro Blvd., Deerfield Beach, FL 33441.**

Remington sculpted the Broncho Buster in 1895. It was his first sculpture, and said to be his personal favorite. The Roughriders gave a copy of a Broncho Buster to President Teddy Roosevelt which, even now, is still frequently seen in the Oval Office of the White House and is seen sometimes in the background during TV interviews with the President. The mold used to create the silver edition was taken directly from the bronze original Broncho Buster given to the Remington Museum by Remington's widow, Eva, in 1918.

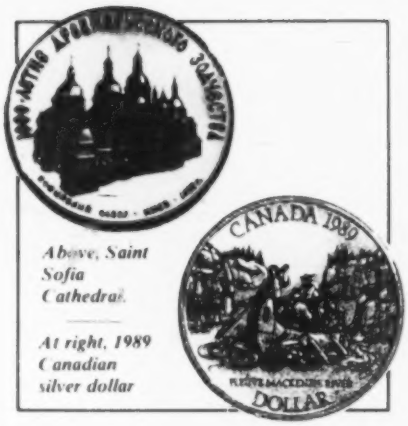
Remington's bronze works are popular among art collectors and the masses. Appraised works of Remington reportedly sell for between $100,000 and $2,000,000. The initial offering price for the 100 silver sculptures is $25,000. The sculptures are being sold exclusively by **Liberty Mint, 651 Columbia Lane, Provo, Utah 84604. Tel. 1-800-877-6468.** According to Mr. Friedman, "Within a matter of days after the announcement, 78 units were sold."

According to Lowell McAllister, Executive Director of the Frederic Remington Museum, "A portion of the purchase price of each sculpture will be used to further work at the museum, not only as custodians of Remington's great works of art and personal possessions, but as an organization that is working for the preservation of our American western heritage."

USSR, CANADA AND US MARK HISTORIC EVENTS WITH NEW SILVER COINS

Three of the world's five largest producers are using silver coins to commemorate important aspects of their histories. In December the Soviet Union unveiled two new silver coins of the USSR, each containing one troy ounce of pure silver. One of the two coins *(shown on page 4)* commemorates 1,000 years of Russian architecture and portrays **Kiev's Russian Orthodox Cathedral of St. Sofia.** The other silver coin marks the 1,000 anniversary of coin minting in Russia and shows a reproduction of a 988 coin bearing a portrait of Christ on one side and the Great Prince Vladimir Svyatoslavich on his throne on the other.

The two Soviet silver coins may be purchased for $69.95 plus $7.50 for shipping from **MTB Banking Corp., 90 Broad Street, New York, NY 10004-2290.** For credit card orders, call 1-800-535-7481.



Above, Saint Sofia Cathedral.

At right, 1989 Canadian silver dollar

During the latter part of February, the Royal Canadian Mint announced the striking of its 1989 commemorative silver dollar, *(at left)* honoring **Sir A. Mackenzie's famous 1789 canoe expedition, proving that the Cook River (now the Mackenzie River) did not lead to the Pacific Ocean but to the Arctic.** This is one of a series of beautiful and popular Canadian numismatic coins that the Mint has been issuing yearly since 1973.

The Canadian commemorative silver dollars contain 50% pure silver. The price of the 1989 silver dollar is US $18.80 ($21.95 CAN) for the Proof version (frosted relief on brilliant field) and US $13.90 ($16.25 CAN) for the Brilliant Uncirculated version (brilliant relief on brilliant field). Mail orders to the Mint should be addressed to: **The Royal Canadian Mint, Box 457, Station A. Ottawa, Ontario Canada K1N 9H3.**

In March, U.S. Treasury Secretary, Nicholas F. Brady, announced the designs of three coins commemorating the **bicentennial of the U.S. Congress.** The 1988 Bicentennial of the U.S. Congress Commemorative Coin act calls for the issuing of three million, one dollar silver coins. Production of these coins will begin in late Spring. Further information can be obtained by calling 1-301-436-7400 or by writing to: **Customer Service Center, U.S. Mint, 10001 Aerospace Drive, Lanham, MD 20706.**

MULTIMEDIA SHOW ON "THE FASCINATION OF SILVER"

Members attending The Silver Institute's recent Annual Meeting were the first public group to preview ***The Fascination of Silver***—an 18-minute multimedia show prepared as the focal point for visitors to the new $6.5 million **American Silver Museum** which will open in Meriden, Connecticut in December 1989. ***The Fascination of Silver*** highlights the mining of this precious metal and the processes required to transform the rough ore into a variety of beautiful consumer products, as well as informing viewers about the many applications of silver in everyday life, in technology, and in scientific and medical environments. "The silver industry has played a key role in the growth of Meriden . . . and the whole Northeastern United States, ever since the mid-nineteenth century," said Stephen Victor, the Executive Director of the new museum, and added that Meriden's museum will be "the only museum in the United States dedicated exclusively to the art, history, and science of silver and silvermaking."

Further information may be obtained by contacting the American Silver Museum, 39 West Main Street, Meriden, CT 06450-4110. Telephone: 1-203-238-7585.

FOR FUTURE REFERENCE:

1989 Silver Prices

1989	High	Low	Average
Mar. 89	6.19	5.72	5.94
Feb. 89	5.97	5.80	5.87
Jan. 89	6.20	5.77	5.98
			COMEX

Annual Silver Prices 1977-1988

Year	High	Low	Average
1988	8.06	6.01	6.53
1987	10.20	5.36	7.01
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62
			COMEX

THE SILVER INSTITUTE
A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS
INCORPORATED 1971
1026 16th Street, NW, Suite 101, Washington, D.C. 20036. Tel. (202) 783-0500, Telefax (202) 783-2127

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LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	DECEMBER 1988	NOVEMBER 1988	Jan-Dec 1988	Jan-Dec 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE				MONTHLY RATE	
From Primary (ores & concentrates)	4,655,704	3,511,249	3.4	3.3	3.3
From Coins	30,000	150,000	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,085,845	3,133,999	2.9	2.4	2.4
From New Scrap (in-plant clippings, waste)*	2,954,245	2,749,680	2.5	2.0	2.0
TOTAL PRODUCTION	9,725,794	9,544,928	8.8	7.7	7.7
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	3,965,166	4,684,363	4.4	3.7	3.7
Shipped Out as 999 Silver	6,351,611	4,898,893	4.3	4.0	4.0
TOTAL DISPOSITION	10,316,777	9,583,256	8.7	7.7	7.7
RESULTING CHANGE OF THESE REFINERS'				TOTAL FOR PERIOD	
STOCKS (Production Minus Disposition)	-590,983	-38,328	0.5	-0.3	-0.3
THESE REFINERS' STOCKS AT END OF PERIOD	500,224	1,091,207	0.5	0.0	0.0

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	DECEMBER 1988	NOVEMBER 1988	Jan-Dec 1988	Jan-Dec 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE				MONTHLY RATE	
From Primary (ores & concentrates)	12,686,196	14,302,465	14.4	14.5	14.5
From Coins	6,316	1,008	0.0	0.1	0.1
From Old Scrap (used photo film & other products)	3,538,953	4,462,366	3.8	3.5	3.5
From New Scrap (in-plant clippings, waste)*	1,080,173	1,444,872	1.1	1.0	1.0
TOTAL PRODUCTION	17,311,638	20,210,711	19.4	19.1	19.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	3,097,585	2,277,016	2.1	2.0	2.0
Shipped Out as 999 Silver	15,909,414	17,421,407	17.1	17.0	17.0
TOTAL DISPOSITION	19,006,999	19,698,423	19.2	19.0	19.0
RESULTING CHANGE OF THESE REFINERS'				TOTAL FOR PERIOD	
STOCKS (Production Minus Disposition)	-1,695,361	512,288	1.7	0.9	0.9
THESE REFINERS' STOCKS AT END OF PERIOD	7,561,760	9,257,121	7.6	5.9	5.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

PUBLISHED SINCE 1971 JUNE-JULY 1989

HECLA'S ARTHUR BROWN ELECTED PRESIDENT OF SILVER INSTITUTE

The Annual Meeting of Members of The Silver Institute was held on Grand Cayman Island, British West Indies, on March 15. At that time, the members voted to express their **thanks to Robert J. Muth of ASARCO for his service as President of The Silver Institute for the past two years.** They also elected a new Board of Directors for the 1989-1990 term and voted for **Arthur Brown of Hecla Mining Co. as the Institute's new President.**

Arthur Brown

Mr. Brown graduated from Witwatersrand Technical College, South Africa, as a Mining Engineer in 1961. Following his graduation, he worked with Cementation Co. (Canada, Ltd.) until 1967 when he began his career with Hecla Mining Company in Coeur d'Alene, Idaho, as an Industrial Engineer. **Mr. Brown is now Chairman, President and Chief Executive Office of Hecla Mining Co.**

In addition to his active participation in the affairs of The Silver Institute, Mr. Brown serves as a Director of the Idaho Association of Commerce & Industry, Idaho Mining Association, American Mining Congress and the World Gold Council. He is also a Trustee of the University of Montana Foundation.

RETAIL SILVER BULLION SALES SOAR!

Thousands of small investors have been buying silver bullion coins and bars because, although these may be confusing times, some things are clear to them. **One.** They know that although many currencies have come and gone, silver's inherent value as a trading metal has been recognized since 700 B.C. **Two.** Many people believe silver is a "good buy" at between $5 and $6 dollars.

As a result, during the first quarter of 1989, U.S. Mint sales of one-ounce silver American Eagle coins climbed to a record 2,871,000, an increase of 26,000 over the 2,845,000 minted in the first quarter of 1987. The **Royal Canadian Mint** reports, "Silver Maple Leaf sales during the first quarter of 1989 were 1,135,000 troy ounces, bringing to 2,197,000 the total ounces sold since the launch of the coin last November. Sales in all markets have exceeded forecasts made when the coin was first launched."

The Canadian Silver Maple Leaf coin has proved to be particularly popular because when the Canadian government gave its 999 fine silver, one-ounce Maple Leaf a legal tender value of $5 Canadian, their Silver Maple Leafs would retain their value and never be worth less than $5 Canadian, or the equivalent in foreign exchange.

In New York City, the senior Coin Trader of **MTB Banking Corp.**, Michael Kramer says that since the middle of May, MTB's sales of silver bullion—much of it is 100 ounce bars—have increased 400% over preceding weeks. And the Vice President for Retail Sales of **Deak International**, Darryl Grayson says, "During May, more people purchased silver than any other metal. In fact, our May sales of both silver bullion coins and bars were 64% above our April sales.

FOR FUTURE REFERENCE:

1989 Silver Prices

1989	High	Low	Average
May 89	5.68	5.06	5.44
Apr. 89	5.80	5.57	5.78
Mar. 89	6.19	5.72	5.94
Feb. 89	5.97	5.80	5.87
Jan. 89	6.20	5.77	5.98

COMEX

Annual Silver Prices 1977-1988

Year	High	Low	Average
1988	8.06	6.01	6.53
1987	11.25	5.35	6.99
1986	6.32	4.85	5.49
1985	6.89	5.48	6.14
1984	10.17	6.25	8.15
1983	14.74	8.38	11.46
1982	11.30	4.81	7.93
1981	16.53	7.97	10.53
1980	50.35	10.20	20.66
1979	35.00	5.93	11.20
1978	6.12	4.82	5.40
1977	4.99	4.30	4.63

COMEX

In Dallas, Texas, the **Sunshine Mining Co.**'s Operations Manager, Michael B. Brown, reports that Sunshine's sales of silver bullion medallions and bars increased by 300% in one week, followed by a 200% increase the following week. **What does this mean? For many people this means now is the time to buy silver—and they are buying!**

SUPERCONDUCTOR MARKET COULD USE 29 MILLION OUNCES OF SILVER YEARLY

Silver will play a major role in the development of a $12 billion market for high temperature superconductors. In fact, according to Dr. Sungho Jin of **AT&T Bell Laboratories**, Murray Hill, N.J., "It's hard to see how a high temperature superconductor could be used without silver."

But what is a superconductor? Dr. Jin explained, "It's a unique material that conducts electricity easily, just like copper, silver or gold, but it is much better because it has no electrical resistance at all." For example, he added, "a superconductor is a trillion times more conductive than a copper conductor."

Why is silver important? Dr. Jin explained silver and gold are the only two metals that will not react and poison the superconductor on close contact, and silver is preferred because it is the more economical of the two. Silver can be used in a number ways. It can be used as clad, or core metal, to stabilize the composition of superconductor wires. It could be dispersed through the high temperature superconductor. Or it could be used as a contact metal to join the superconductor to an outside metal.

One result of this union of silver and superconductors could be powerful, silver-using superconductive batteries that could last a thousand years and be used in automobiles, airplanes and powerpacks that would operate quietly without pollution. And since superconductors have attributes very similar to magnets and cause levitation, they may someday be used to float trains above the rails. These trains could move at about half the speed of jet planes because the resistance between wheels and rails will have been eliminated.

Then there is superconductive fusion energy which could produce tremendous energy without producing a tremendous amount of nuclear waste, Dr. Jin added, "It would be like capturing a piece of the sun—unlimited amounts of energy. With unlimited amounts of energy, we would have unlimited amounts of food and everything would be better in the world. . . ."

What is the estimated size of the market? Dr. Jin said that it is estimated that in about 10 years there will be a $12 billion market for superconductors. He recalled, though, that when the transistor was discovered, if anybody had suggested a billion dollar market, the experts would have said that he was crazy. However, "right now, we have a world market for electronics, we're talking about *hundreds* of billions of dollars. So it is very difficult to say."

Dr. Jin sees a high potential for the use of silver in superconductors in the fields of electronics, aerospace, defense, transportation, power generation and energy storage, industrial, and engineering.

He added, "Conceivably, 100,000 pounds of superconductor a year would mean 291,000 ounces of silver a year. If you would get 100 times more consumption of high temperature superconductors, then the growth of use of silver would increase exponentially, so **29 million ounces of silver would then be used. And a lot more silver could be used as new consumer products are developed. Imagine a pound of silver in every car in the world."**

SUNSHINE'S POPULAR SILVER INVESTMENT VIDEOTAPE AVAILABLE

Video by Pinnacle Productions International, Inc.

Gov. Cecil Andrus of Idaho with Sunshine silver bar.

Sunshine Mining Co., 300 Crescent Court, 15th Floor, Dallas, Texas 75201, has produced a dramatic videotape that promotes viewer interest in investing in silver. . . Beautiful shots of silver as treasure through the centuries. Words: "Since the dawn of civilization, all around the world, silver has been a treasure. . . a treasure that even the common man can own." Computer generated charts and graphs show silver's investment fundamentals. **Investment clubs, brokerages, and other similar institutions may obtain a complimentary or loan tape by calling 1-800-2-SILVER.**

TO HAVE AND TO HOLD STERLING KEEPSAKES FOR THE WEDDING PARTY

by Diana Shiel

The byword for weddings today is traditional, as wedding goers around the country are attending more formal, elegant gatherings. From the ceremony and wedding finery to the flowers and gifts for the bride, groom and wedding party, everything follows the current trend to lavish, individualized weddings. And, a key ingredient in any traditional wedding is the bridal party—those old and new friends, family and loved ones that help make a most important day perfect.

Say special thanks to the bridesmaids and ushers with a lasting gift that shows heartfelt appreciation and will always be treasured. Select something personal for each individual. In fact, according to Bride's Magazine, personalized gifts are the most popular presents for attendants today. "A personalized gift shows that you have put a great deal of thought into the selection of a gift," says Jo-Ann Bloomberg, associate editor of Brides. "It should have special meaning based on experiences that have been shared."

Say special thanks to the bridesmaids and ushers in your wedding party with a lasting memento they'll always treasure—a gift of sterling silver. Shown here, clockwise from the top: butterfly pin by Jondell; heart bookmark by Towle; Tussie-Mussie by Cazenovia; cuff links by Jondell; belt buckle by Charles Krypell; razor by Moor; and perfume flacon by Towle.

One of the longtime favorites for any special wedding party is a gift of silver. **"The ideal memento for the wedding attendants is something that is permanent, lasting, with intrinsic value, such as sterling silver,"** says Gerard J. Monaghan, President of the Association of Bridal Consultants, and "Silver jewelry or jewelry-related gifts are always remembered by the recipient long after the wedding day."

And, according to Silver Trust International, there is an ever-widening assortment of affordably priced shining silver gifts to choose from. Many of them can even be engraved or personalized with initials and wedding dates.

Traditionally, each bridesmaid receives an identical gift, as do the ushers, and honor attendants are usually acknowledged with something a little more special. But, tradition can be broken and each attendant given a personal gift—chosen especially for her or him.

If you are looking for a truly memorable gift, consider these sentimental ideas:

- **For Him:** Give a man in the forefront of fashion silver cuff links for his French cuff shirts, a handsome sterling belt buckle, money clip, or key ring. For the man who likes to be pampered, a sleek silver razor is a good gift suggestion.

- **For Her:** Romance is in the air, so gift bridesmaids with elegant silver makeup brushes; compacts or perfume flacons to grace the vanity or tuck into a purse; a small, colorful bouquet of flowers in a Victorian sterling silver Tussie-Mussie; silver barrettes to wear on the wedding day; a dainty pin; or a bookmark tucked into a pocket datebook.

So remember, take time to choose a meaningful, lasting gift of sterling silver—it carries a very special message of thoughtfulness and love for the friends and relatives who help make the wedding day a perfect day.

CHINA TO MINT FIRST ONE-OUNCE SILVER PANDA COIN

Noting the worldwide surge in demand for silver bullion coins, the China Mint recently announced the addition of a **1989 Silver One Ounce Panda** to its 1989 family of very popular Gold Panda bullion coins. Like the silver American Eagle bullion coin, the new Silver Panda contains one troy ounce of 999 fine silver and measures 40mm in diameter. As shown in the *picture at left*, the 10 Yuan Silver Panda depicts the much-loved Giant Panda, eating his favorite meal. Unlike bullion coins of other nations, the Silver Panda will change its design on a yearly basis, giving it added numismatic value.

Luis Vigdor, Executive Vice President of **MTB Banking Corp**., 90 Broad Street, New York, NY 10004-2290, the company that distributes the Silver Panda, believes the Silver Panda will attract new buyers to the bullion market, and called the new coin "very exciting" because this is China's first silver bullion coin; only 250,000, 1989 one-ounce coins will be struck (compared with the 5 million *Silver Eagles* struck in its first-year-of-issue); and first-year-of-issue coins are very popular with the world's coin collectors.

Although the new silver coin will not be available until late June or early July, people who are interested in buying the coin should call 1-800-535-7481 to have their names placed on a **"priority waiting list"** for this issue. MTB Banking Corp.'s market forecasts point to a complete sell out immediately after its release. Each Silver Panda coin will sell for $14.95 in lots of ten, or $19.95 for a single coin.

SILVER HALTS DEADLY "LEGIONNAIRES DISEASE"

In 1976, during a convention of the American Legion in Philadelphia, dozens of the Legionnaires were stricken—several fatally—by an unidentified organism circulated throughout their hotel through its air conditioning system. The disease was called ***Legionella pneumophila.***

Now, international attention is focused on ***Legionella pneumophila*** again because of the many illnesses and deaths caused when this disease struck London in April 1988, and then again in January 1989. This time, though, water-cooling air conditioning towers which were operating during those months were named as the source of ***Legionella pneumophila*** by **The Times.** Tiny droplets of infected water were carried by air from the towers and were inhaled by pedestrians passing below.

Attacks by *Legionella pneumophila* can be prevented by silver treatment of cooling-tower water and very low levels of chlorine. This treatment "has proven to be 1,000 times more effective than chlorine alone for killing Legionella bacteria," says Dr. Charles P. Gerba, Department of Microbiology and Immunology, University of Arizona, Tucson, Arizona. Furthermore, he adds, "silver tends to adsorb on the wall surfaces and this accounts for its continued germicidal action long after silver treatment is stopped."

The number of silver-protected cooling towers is increasing as the restrictions against dumping chemicals from cooling-towers into municipal water systems multiply. The use of silver as the primary bactericidal agent provides the cooling tower operator with a clean alternative to these heavy chemical treatments.

For over two years, the four 1,000-ton cooling towers at the M.D. Anderson Cancer Hospital in Houston—treated with a silver-copper system—have been providing bacteria-free protection *without any other treatment.* A growing number of cooling towers are now being similarly treated in the USA and UK. Not only does silver provide bacteriostatic protection for the cooling solutions, it does so without the severe corrosion accompanying the use of chlorine.

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Editor, David U. Groves

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LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	JANUARY 1989	DECEMBER 1988	Jan 1989	Jan 1988	Full Year 1988
THESE REFINERS' PRODUCTION, BY SOURCE				MONTHLY RATE	
From Primary (ores & concentrates)	4,345,852	4,655,704	4.3	3.3	3.4
From Coins	0	30,000	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,978,732	2,085,845	3.0	2.8	2.9
From New Scrap (in-plant clippings, waste)*	2,700,082	2,954,245	2.7	1.8	2.5
TOTAL PRODUCTION	10,024,666	9,725,794	10.0	7.9	8.8
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,703,998	3,965,166	4.7	3.9	4.4
Shipped Out as 999 Silver	4,647,098	6,351,611	4.6	3.4	4.3
TOTAL DISPOSITION	9,351,096	10,316,777	9.4	7.3	8.7
RESULTING CHANGE OF THESE REFINERS'				TOTAL FOR PERIOD	
STOCKS (Production Minus Disposition)	673,570	-590,983	0.7	0.5	0.5
THESE REFINERS' STOCKS AT END OF PERIOD	1,173,794	500,224	1.2	0.5	0.5

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	JANUARY 1989	DECEMBER 1988	Jan 1989	Jan 1988	Full Year 1988
THESE REFINERS' PRODUCTION, BY SOURCE				MONTHLY RATE	
From Primary (ores & concentrates)	13,532,708	12,686,196	13.5	17.5	14.4
From Coins	0	6,316	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	4,234,186	3,538,953	4.2	3.3	3.8
From New Scrap (in-plant clippings, waste)*	1,511,484	1,080,173	1.5	0.8	1.1
TOTAL PRODUCTION	19,278,378	17,311,638	19.3	21.6	19.4
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	2,372,451	3,097,585	2.4	1.9	2.1
Shipped Out as 999 Silver	15,397,732	15,909,414	15.4	17.8	17.1
TOTAL DISPOSITION	17,770,183	19,006,999	17.8	19.7	19.2
RESULTING CHANGE OF THESE REFINERS'				TOTAL FOR PERIOD	
STOCKS (Production Minus Disposition)	1,508,195	-1,695,361	1.5	1.9	1.7
THESE REFINERS' STOCKS AT END OF PERIOD	9,069,955	7,561,760	9.1	7.8	7.6

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

PUBLISHED SINCE 1971 AUGUST-SEPTEMBER 1989

FALL SILVER JEWELRY ADVERTISING CAMPAIGN ANNOUNCED

Details of **Silver Trust International's (STI)** expanded consumer magazine advertising campaign to promote silver jewelry were disclosed recently by the organization's Director, Linda Meehan.

Silver Trust International is a marketing organization founded in 1988 by six silver-producing members of **The Silver Institute**—ASARCO, Inc., Callahan Mining Corp., Coeur d'Alene Mines Corp., Hecla Mining Co., Noranda Sales Corp. and Sunshine Mining Co.—to stimulate sales of silver consumer products.

Since then, three more important silver producers—Falconbridge Ltd., Nerco Minerals Co. and Echo Bay Mines—have joined this effort. With their financial support, STI will not only reach **many more buyers of silver jewelry, but will also be able to expand its scope to include silver giftware and flatware products.**

"Last year's premier national campaign was well-received by both retailers and consumers alike, and demonstrated effective sell-through at the retail level," said Ms. Meehan.

Silver Trust International's advertisements—*one is shown above*—will evoke a mood of mystery and drama at the same time they create a desirable environment for silver jewelry; however, this year, each of the ads will be signed by an individual jewelry manufacturer with accompanying retail listing.

This promotional effort, supported by a major public relations multi-media program and retail tie-ins, is targeted at sophisticated, fashion-conscious women living in metropolitan areas, aged 25 to 34, and having individual incomes of $30 thousand or more.

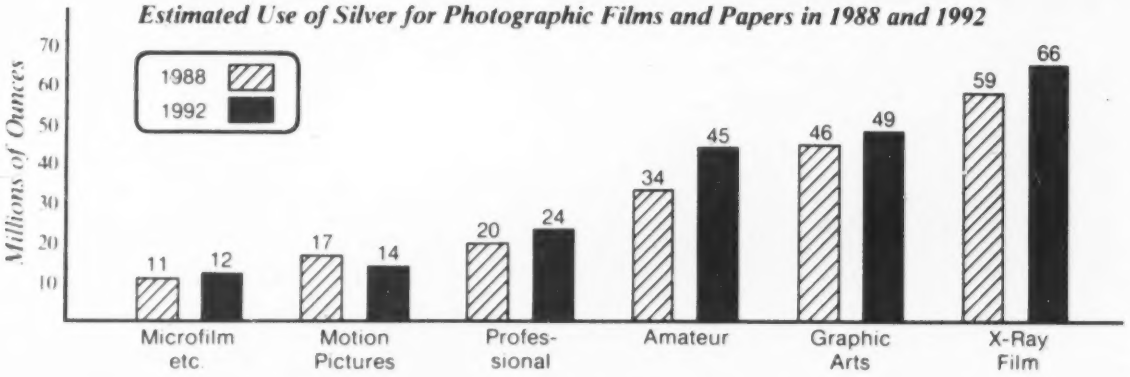
Beginning in September through December, three dramatic ads will appear in regional as well as national magazines such as ***Elle, Harper's Bazaar, Lear's, Savvy, Self, Vanity Fair*** and ***Vogue.***

ROBUST INCREASE IN USE OF SILVER BY PHOTOGRAPHIC INDUSTRY

The "robust growth" of the photographic industry and its steadily increasing use of silver—187 million troy ounces in 1988, up from 172 million ounces in 1987—added to the optimistic outlook for this year and the next few years, suggest that "our 1992 projection of the use of silver in photography should be at least 210 million ounces," according to a report by Peter Krause, Vice President, **Imaging Technology/Markets, Inc.** given during the recent Annual Meeting of the Institute.

Alan Cummins, Director of Corporate Sourcing of the world's largest consumer of silver, **Eastman Kodak**, told Institute members, "Just in the last eight years, worldwide amateur color negative exposures—snapshots—have gone from 23 billion to over 40 billion. That's over 100 million exposures every day. Growth is expected to come to 48 billion snapshots annually by 1990 and 65 billion by the mid-1990s."

As indicated in the *chart on page 2*, based on data provided by Mr. Krause, by using 59 million ounces of silver, X-rays ranked first in photographic industry use of silver in 1988. Mr. Krause expects that in a health-conscious world, by 1992, X-rays will consume 66 million ounces of silver in spite of the presence and availability of digital imaging in most hospitals. This is because the digital format cannot begin to compete with silver halide on a quality or cost basis.



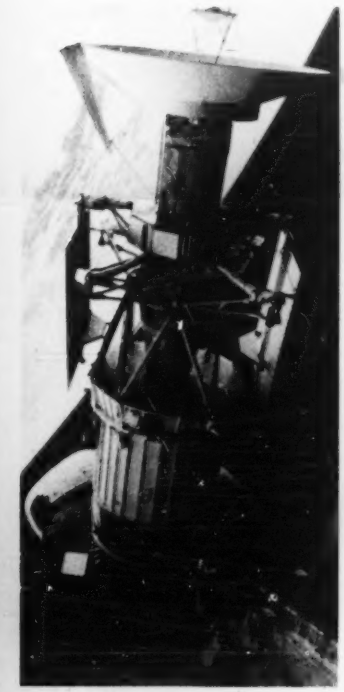
Regarding Electronic still cameras, Mr. Krause said, "Most industry experts believe that this new imaging system will not cause a significant slowdown in the growth of silver halide photography; rather, that the two systems will grow side by side and the color prints that are sought after by most of the world's amateur photographers, will continue to be made on photographic color paper for the foreseeable future."

In the face of the anticipated growth of the photographic market, Mr. Krause said that many older plants are being modernized and expanded and new photographic manufacturing plants are being constructed in Brazil. China, Netherlands, India, South Korea, Taiwan and the USA. In addition, Mr. Krause said that important advances in photographic technology have enabled all of its sectors to work faster and more efficiently.

Industrial demand has far exceeded mine production of silver since before World War I and, as a result, recycling of silver is essential for the photographic industry. In 1988, almost 116 million ounces of the 187 million ounces used were recycled, thus the **net silver consumption by the world's photographic industry was about 71 millions ounces.** Some 70% of this recycled silver came from processing solutions, another 20% from the manufacturing level, and 10% from old film.

Mr. Krause said that his outlook is bullish for silver in the photographic industry where he expects a growth rate of between 4% and 7% per year for the next five years.

SILVER SPACECRAFT, MAGELLAN, HEADS FOR VENUS



As the U.S. spacecraft, Magellan, speeds on its 15-month journey to Venus, its main source of power is an array of silver-coated cells, linked together by silver circuits. Silver coating is the best material to maximize the collection of solar energy.

But that is just one aspect of silver's role in the flight of Magellan! The reason Magellan is dubbed "the silver spacecraft" is because the entire craft is covered with 24,171 silver-coated quartz tiles. Silver was not used for aesthetic reasons, although many observers say that Magellan is a beautiful sight.

The silver-quartz tiles are vital to Magellan's mission when it orbits around Venus because, there, the craft will be subjected to twice the solar radiation of the earth, plus that which is reflected from the clouds covering Venus. To prevent this heat load from causing early failure of this $500 million project, the quartz blocks infra-red radiation while the pure silver completes the job by reflecting away 97.5% of all visible light rays.

Also, by using silver-quartz reflector tiles to cover the entire back of Magellan's solar cell panels and about one third of the front of its panels, the operating temperature of the solar cell panels will be kept down to about 100C, thus preventing its overheating and premature failure in the Venusian environment.

Magellan will collect and transmit data on what some call Venus' "runaway greenhouse effect," with temperatures about 900C and 90 times the atmospheric pressure of earth. This knowledge may help mankind avoid a future greenhouse-effect disaster.

SALES TAX RELIEF FOR SILVER COINS AND BULLION

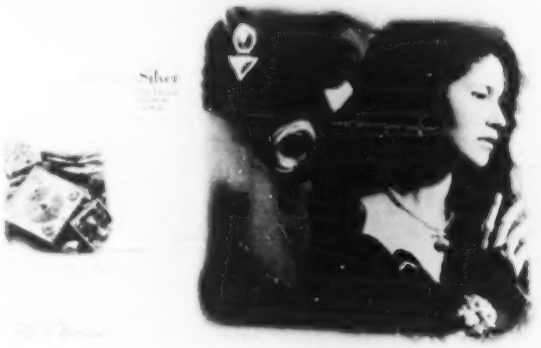
In recent months, an effort to place precious metal coins and bullion on an equal footing with other investment products which are generally not taxed has yielded a harvest of tax exemptions in Texas, Ohio and New York.

Since mid-July, Ohio has given silver bars, ingots, bullion coins and numismatic silver coins the same **unconditional retail tax exemption** that investment products, such as stocks, bonds and mutual funds, have always enjoyed. So now, in Ohio, silver investments are on a par with all other tax-free investments.

On June 9, the Governor of Texas signed a bill which **removes the state sales tax on retail investment purchases of silver bullion, bars, ingots and coins amounting to more than $1,000.** Previously, silver was subject to a 4.125% sales tax. Toward the end of July, New York enacted a similar law, effective immediately, containing a sales tax exemption for retail sales of silver bullion coins and bars having a total value of $1,000 or more.

In the United States, nineteen states now exempt precious metal coins and bullion from state sales taxes or have no sales taxes.

SILVER TRUST INTERNATIONAL BRANDS SILVER JEWELRY



The romance and beauty of silver jewelry are illustrated by new Silver Trust International (STI) ads. Each ad is also signed by an individual jewelry manufacturer. "Other industries have proven that brand name association elicits direct consumer response and awareness, which stimulates sales at the retail counter. Fashion products such as apparel, perfume and accessories from sunglasses to leather goods, are all branded successfully from low to high end. Jewelry should also be branded at all levels," the Director of Silver Trust International, Linda Meehan, emphasized.

For its new national cooperative advertising program, **Silver Trust International**, 292 Madison Ave., NYC, NY 10017 sought partners who offered national distribution, medium price points and lines exhibiting quality, fashion and style diversity. This year's partners include **Bayanihan (above), Nancy and David (page 1)**, and **Peter Brams (above).**

According to Thomas Burns of Bayanihan, "The marketplace has matured to the point where fine sterling silver is accepted as mainstay. **STI's** advertising campaign will provide us with the opportunity to differentiate ourselves from the competition insofar as quality and design are concerned. At the same time, it will enable us to provide our retailers with direct market support."

Nancy Stone of Nancy and David remarked, "As devoted designers of sterling silver jewelry, we are utilizing **STI's** marketing expertise and advertising support to achieve greater exposure and reach a broader group of potential consumer purchasers."

Designer Peter Brams explained, "We are introducing a brand new, extensive and directional silver jewelry collection that is aimed at a savvy, confident woman, who strives to be a fashion leader. This collection is a departure from the look one expects from Peter Brams, and I feel **Silver Trust International's** high impact, national advertising campaign will be an ideal vehicle to introduce it. It will further establish brand identity."

INCREASED WORLDWIDE USE OF SILVER

Latest Silver Institute silver refining statistics from all known refiners in the U.S. and most major refiners in the rest of the world indicate that for the first three months of 1989 there was an upward trend in the use of silver for consumer and industrial products throughout the world.

For example, U.S. and non-U.S. refiners production of silver from **new scrap** (in-plant clippings, waste, etc., generated during the manufacture of silver products) averaged 4.2 million ounces of silver for January-March 1989. This is a 17% increase over the average monthly rate of 3.6 million ounces for the full year of 1988.

U.S. and non-U.S. participants also reported an increase in secondary production from **old scrap** (used photo film and other products) for the first three months of 1989. Combined figures totaled 7.7 million ounces—a 15% increase over the 6.7 million ounce monthly average reported in 1988.

While the U.S. refiners total monthly average production of pure silver from **ores and concentrates** for January-March 1989 was 4.4 million ounces, which is a 29% increase over the monthly average for all 1988. Non-U.S. refiners reported a 6% decline for the same period.

NEW! FREE GUIDE TO INVESTING SILVER

"Today, millions of people throughout the world recognize silver's intrinsic value and have made it popular as an affordable investment," according to a new sixteen-page booklet, ***Your Introduction to Investing in Silver***, published by The Silver Institute, a Washington-based trade association and distributed by the Silver Information Center.

"Although the average individual investor may be unsure of what goes on in the stock market, his continued interest in silver is evidenced everyday," said John Lutley, Executive Director of The Silver Institute. "For example, in the first seven months of 1988, the U.S. Mint sold 4.3 million 1-ounce silver bullion coins. During the same period in 1989, demand has expanded to include another 4.3 million ounces in U.S. silver bullion coins **plus** 1.1 million ounces in Canadian silver bullion coins (only 1st quarter figures available). Thus, the market has absorbed 5.4 million ounces of US and Canadian silver bullion coins—26% more than in 1988.

"Obviously, silver coins represent a popular way of investing in silver, but there are many other ways," said Mr. Lutley. "That is why the Institute has published ***Your Introduction to Investing in Silver***—to provide consumers with basic data on the advantages and disadvantages of each investment vehicle."

To receive a free copy of *Your Introduction to Investing in Silver*, please send a self-addressed stamped envelope to **The Silver Information Center**, Suite 101, 1026 Sixteenth Street, Washington D.C. 20036. Additional copies may be purchased from the Information Center. Please ask for price list.

FOR FUTURE REFERENCE:

1989 Silver Prices

1989	High	Low	Average
July 89	5.41	5.11	5.23
June 89	5.45	5.10	5.28
May 89	5.68	5.06	5.44
Apr. 89	5.80	5.57	5.78
Mar. 89	6.19	5.72	5.94
Feb. 89	5.97	5.80	5.87
Jan. 89	6.20	5.77	5.98
			COMEX

Annual Silver Prices 1977-1988

Year	High	Low	Average
1988	8.06	6.01	6.53
1987	11.25	5.35	6.99
1986	6.32	4.85	5.49
1985	6.89	5.48	6.14
1984	10.17	6.25	8.15
1983	14.74	8.38	11.46
1982	11.30	4.81	7.93
1981	16.53	7.97	10.53
1980	50.35	10.20	20.66
1979	35.00	5.93	11.20
1978	6.12	4.82	5.40
1977	4.99	4.30	4.63
			COMEX

THE SILVER INSTITUTE
A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS
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All information in this letter is based on sources considered reliable, but is not guaranteed by The Silver Institute.

Editor, David U. Groves

Postage and Handling Fee: $20 in U.S.A. Other Nations US $25 airmail.

A84 02-

LATEST SILVER INSTITUTE REFINING STATISTICS
Production and Disposition of 999 Silver by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	FEBRUARY 1989	JANUARY 1989	Jan-Feb 1989	Jan-Feb 1988	Full Year 1988
THESE REFINERS' PRODUCTION, BY SOURCE				MONTHLY RATE	
From Primary (ores & concentrates)	4,541,418	4,345,852	4.4	2.9	3.4
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,648,558	2,978,732	2.8	2.9	2.9
From New Scrap (in-plant clippings, waste)*	2,298,285	2,700,082	2.5	1.7	2.5
TOTAL PRODUCTION	9,488,261	10,024,666	9.8	7.6	8.8
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	3,909,768	4,703,998	4.3	4.0	4.4
Shipped Out as 999 Silver	4,767,210	4,647,098	4.7	3.2	4.3
TOTAL DISPOSITION	8,676,978	9,351,096	9.0	7.2	8.7
RESULTING CHANGE OF THESE REFINERS'				TOTAL FOR PERIOD	
STOCKS (Production Minus Disposition)	811,283	673,570	1.5	0.8	0.5
THESE REFINERS' STOCKS AT END OF PERIOD	1,985,077	1,173,794	2.0	0.8	0.5

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	FEBRUARY 1989	JANUARY 1989	Jan-Feb 1989	Jan-Feb 1988	Full Year 1988
THESE REFINERS' PRODUCTION, BY SOURCE				MONTHLY RATE	
From Primary (ores & concentrates)	14,025,293	13,532,708	13.8	15.4	14.4
From Coins	1,102	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	4,256,691	4,234,186	4.2	3.8	3.8
From New Scrap (in-plant clippings, waste)*	2,563,315	1,511,484	2.0	1.1	1.1
TOTAL PRODUCTION	20,846,401	19,278,378	20.1	20.4	19.4
DISPOSITION BY THESE REFINERS					
[illegible]verted in Plant (consumed in fabricating, etc.)	2,720,287	2,372,451	2.5	2.1	2.1
Sh[illegible]ped Out as 999 Silver	17,850,182	15,397,732	16.6	17.6	17.1
TOTAL DISPOSITION	20,570,469	17,770,183	19.2	19.7	19.2
RESULTING CHANGE OF THESE REFINERS'				TOTAL FOR PERIOD	
STOCKS (Production Minus Disposition)	275,932	1,508,195	1.8	1.4	1.7
THESE REFINERS' STOCKS AT END OF PERIOD	9,345,887	9,069,955	9.3	7.3	7.6

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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